

CHAPTER 3

WORKLOAD, CAPACITY, AND CAPACITY UTILIZATION

3.1 INTRODUCTION

This chapter provides tables that depict, by depot, actual and projected workload, capacity, and depot capacity utilization trends over the period FY96-FY03. These figures reflect planned closures, interservicing, consolidations, and divestitures. The tables are comprised of three categories:

- Workload, which shows the amount of workload in direct labor hours (DLH) either executed or expected to be funded in a given fiscal year;
- Capacity Index, which shows the amount of workload in direct labor hours that the depot can effectively produce annually on a single shift, 40-hour week basis; and
- Utilization Index, which is a computation of dividing workload by capacity index.

Capacity and utilization data were requested to be computed in accordance with the DoD 4151.18-H, the *DoD Depot Maintenance Capacity and Utilization Handbook*, 24 January 1997, for all depot activities. Capacity data represents the total capacity at each depot, including reserve and excess capacity.

When appropriate, tables are followed by notes describing particular events effecting workload or capacity levels for those depots. These notes also provide explanations of any unusual fluctuations shown by the data in a given table.

3.2 DEPOT WORKLOAD, CAPACITY, AND CAPACITY UTILIZATION SUMMARY

3.2.1 Army

Table 3-1
Anniston Army Depot (ANAD)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	2,242	1,968	2,374	2,162	1,806	1,746	1,964	1,985
Capacity Index	3,200	3,200	3,200	3,200	3,020	3,005	3,005	3,005
Utilization Index	70%	61%	74%	68%	60%	58%	65%	66%

As a result of BRAC-95, ANAD will receive towed and self-propelled artillery work from Letterkenny Army Depot (LEAD), and M113 family and M9 Armored Combat Earthmover (ACE) work from Red River Army Depot (RRAD). Starting in FY99, self-propelled artillery from LEAD is added to ANAD. The increase in workload in FY98 is attributed to the M188A1 Tanks from Kuwait as part of Reliability-Centered Inspection Repair Only as Necessary (RCI RON) in Operations and Maintenance Army (OMA).

Table 3-2
Corpus Christi Army Depot (CCAD)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	3,234	3,126	2,798	2,787	2,578	2,527	2,564	2,513
Capacity Index	4,394	4,337	3,679	3,679	3,679	3,679	3,679	3,679
Utilization Index	74%	72%	76%	76%	70%	69%	70%	68%

As a result of BRAC-95, a small amount of Apache armament subsystem workload was moved from RRAD to CCAD in FY98.

Table 3-3
Letterkenny Army Depot (LEAD)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	1,571	1,727	1,518	988	875	665	702	692
Capacity Index	1,916	2,082	2,260	1,352	1,349	1,349	1,349	1,349
Utilization Index	82%	83%	67%	73%	65%	49%	52%	51%

FY96 and FY97 workload levels reflect accommodation of the tactical missile mission as a result of BRAC-93. Starting in FY98, BRAC-95 realignments reduced the LEAD workload including: towed artillery transfers to ANAD in FY98; self-propelled artillery transfers to ANAD in FY99; and 50 percent of the missile guidance and control transfer to TYAD in FY00, with the remainder following in FY01. LEAD will retain only missile ground support equipment.

Table 3-4
Red River Army Depot (RRAD)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	1,614	1,559	993	772	708	921	1,019	1,100
Capacity Index	3,095	2,602	2,352	2,104	1,569	1,569	1,569	1,569
Utilization Index	52%	60%	42%	37%	45%	59%	65%	70%

BRAC-95 realigned all RRAD workload except the Bradley Fighting Vehicle System (BFVS), the Multiple Launch Rocket System (MLRS), Patriot and Hawk

workloads done at the Theater Readiness Monitoring Facility (TRMF), and work at the rubber products facility. Bradley workload declines from FY96 through FY99 and starts to increase in FY00.

**Table 3-5
Tobyhanna Army Depot (TYAD)
(DLH 000)**

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	2,753	2,450	2,796	3,007	3,391	3,364	3,338	3,157
Capacity Index	4,015	4,147	4,147	4,147	4,147	4,147	4,142	4,139
Utilization Index	69%	59%	67%	73%	82%	81%	81%	76%

The workload, capacity, and work positions at TYAD will increase as a result of BRAC. Starting in FY98, TYAD receives all “common-use” ground communications-electronics workload from Sacramento Air Logistics Center in line with the “20/40/40 percent” agreement. Starting in FY00 TYAD receives 50 percent of the tactical missile guidance and control workload from LEAD, and will receive 100 percent of that workload in FY01.

Note: In addition to the above Army depots, the Tooele Army Depot Rail and Equipment Center accomplishes about 15,000 DLH of workload annually.

3.2.2 Naval Air Systems Command

**Table 3-6
Naval Aviation Depot Cherry Point (NADEP Cherry Point)
(DLH 000)**

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	3,640	3,685	4,110	4,179	4,179	4,179	4,179	4,179
Capacity Index	4,447	4,298	4,418	4,417	4,417	4,417	4,417	4,417
Utilization Index	82%	86%	93%	95%	95%	95%	95%	95%

The increase in workload from FY97 to FY98 is associated with the aircraft, manufacturing, and Production Support Directorate (PSD) programs. Aircraft workload increased for the H-46, H-53, and F-4E (FMS - Egyptian Air Force). Manufacturing workload increased because of additional aircraft being reworked. PSD increased due to additional engineering and logistics requirements for the AV-8B and H-60. Currently, the H-60 is being prototyped for new rework under the Integrated Maintenance Concept (IMC). For FY99, Component workload increased for Navy Stock Fund items.

Table 3-7
Naval Aviation Depot Jacksonville (NADEP Jacksonville)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	4,231.0	4,040.0	4,262.0	4,610.0	4,610.0	4,610.0	4,610.0	4,610.0
Capacity Index	5,023.0	4,769.0	4,805.0	4,723.0	4,723.0	4,723.0	4,723.0	4,723.0
Utilization Index	84%	85%	89%	98%	98%	98%	98%	98%

The decrease in workload from FY96 to FY97 is due primarily to the BRAC program. The increase in workload for FY99 is attributed to the aircraft, engine, and component programs. Aircraft workload increased for the F-14. Engine workload increased for the J52 and TF34. Component workload increased for Navy Stock Fund items.

Table 3-8
Naval Aviation Depot North Island (NADEP North Island)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	4,069	3,915	4,696	4,712	4,712	4,712	4,712	4,712
Capacity Index	5,329	4,949	5,014	5,076	5,076	5,076	5,076	5,076
Utilization Index	76%	79%	94%	93%	93%	93%	93%	93%

The decrease in workload from FY96 to FY97 is due primarily to the BRAC program. The increase in workload for FY98 is attributed to the aircraft, component, and calibration programs. Aircraft workload increased for the C-2A, E-2C, and F/A-18. Component workload increased for Navy Stock Fund items. Starting in FY98, all Navy Calibration Laboratories were re-aligned under NADEP North Island.

Note: Since the closure of NADEPs Alameda, Norfolk and Pensacola has been completed, these depot facilities are no longer reported. There was a small amount of workload accomplished at those facilities in FY96, which has been included in the Service totals depicted in Chapter 2.

3.2.3 Naval Sea Systems Command

Table 3-9
Naval Shipyard Portsmouth (NSY Portsmouth)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	3,872	4,120	3,744	3,680	4,216	4,080	3,793	4,200
Capacity Index	7,028	7,028	7,028	7,028	7,028	7,028	7,028	7,028
Utilization Index	55%	59%	53%	52%	60%	58%	54%	60%

Workload fluctuations in any given year are due to scheduled workload resulting from Fleet Scheduling Conferences and ship depot maintenance schedules. Portsmouth's workload consists of SSN 688 Class Refueling Overhauls from FY99 - FY03 after a two-year absence due to cancellations resulting from force level decisions.

Table 3-10
Naval Shipyard Norfolk (NSY Norfolk)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	8,952.0	8,936.0	8,848.0	9,320.0	8,765.0	9,680.0	10,251.0	12,035.0
Capacity Index	12,000.0	12,000.0	12,000.0	12,000.0	12,000.0	12,000.0	12,000.0	12,000.0
Utilization Index	75%	74%	74%	78%	73%	81%	85%	100%

Workload fluctuations in any given year are due to scheduled workload resulting from Fleet Scheduling Conferences and ship depot maintenance schedules. Norfolk's workload is heavy in the 01 - 03 timeframe primarily due to labor intensive CVN maintenance and SSN Refueling Overhauls.

Table 3-11
Naval Shipyard Puget Sound (NSY Puget Sound)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	11,304	11,360	10,088	11,272	9,177	9,925	8,871	10,865
Capacity Index	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Utilization Index	81%	81%	72%	81%	66%	71%	63%	78%

Workload fluctuations in any given year are due to scheduled workload resulting from Fleet Scheduling Conferences and ship depot maintenance schedules. Puget Sound has a high percent of their workload associated with nuclear submarine (SSN) and nuclear cruiser (CGN) inactivation work. The balance of their workload is in CVN and SSBN maintenance.

Table 3-12
Naval Shipyard Pearl Harbor (NSY Pearl Harbor)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	3,248	2,824	2,784	2,968	2,819	2,377	2,656	2,777
Capacity Index	5,320	5,320	5,320	5,320	5,320	5,320	5,320	5,320
Utilization Index	61%	53%	52%	56%	53%	45%	50%	52%

Workload fluctuations in any given year are due to scheduled workload resulting from Fleet Scheduling Conferences and ship depot maintenance schedules. Pearl Harbor has a steady workload during this period consisting mainly of SSN Depot Modernization Periods (DMP) and support of Fleet maintenance requirements in the Pearl Harbor homeport.

Table 3-13
Naval Surface Warfare Center Crane Division (NSWC Crane)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	479	498	468	502	504	493	500	504
Capacity Index	615	642	660	683	682	713	713	713
Utilization Index	78%	78%	71%	74%	74%	69%	70%	71%

NSWC Crane workload is comprised of microwave tubes, electronic warfare, radar, electronic modules, electro-optics and chemical/biological detection equipment. Overall workload remains fairly stable, with increases in one commodity area offset by decreases in others. For example, microwave tube, electronic module and electronic warfare workloads will decline while satellite control/space sensors and some aircraft components workloads increase. Radar and other commodities fluctuate, but are generally stable. The capacity increase is due to an addition to Building 3234 in FY99, and a MILCON (#P-270) in FY00 for aircraft avionics/electronics components workload. Capacity increases also because of a transfer of A-7 test equipment from NADEP JAX to Crane as an indirect result of BRAC, and installation of government-owned equipment in the Tactical Embedded Computer Resources program returned to Crane by a contractor upon completion of a contract.

Table 3-14
Naval Undersea Warfare Center Keyport (NUWC Keyport)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	698	690	680	773	714	656	650	667
Capacity Index	873	734	734	734	734	734	734	734
Utilization Index	80%	94%	93%	105%	97%	89%	89%	91%

All BRAC-95 depot realignment actions have been completed at NUWC Keyport. Associated equipment, personnel, process information and workload have been realigned to Puget Sound Naval Shipyard. Organic depot maintenance workload at NUWC Keyport is projected to remain relatively stable, except for a small increase during FY99 due to the increase in the number of heavyweight torpedoes processed.

3.2.4 Space and Naval Warfare Systems Command

Table 3-15 combines three SPAWAR depot facilities. These facilities include the SPAWAR Systems Center, San Diego (formerly Naval Command, Control and Ocean Surveillance Center (NCCOSC) In-Service Engineering (NISE West)); SPAWAR Systems Center, Charleston (formerly NISE East); and the SPAWAR Systems Center Charleston Detachment, Norfolk (formerly the NISE East Det. Norfolk). The depot capability at the Norfolk detachment will be transferred to the Norfolk Naval Shipyard on 1 July 2001 as a result of BRAC-95.

Table 3-15
SPAWAR Depot Operations
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	586	585	602	570	427	427	418	420
Capacity Index	704	660	746	788	513	509	509	506
Utilization Index	83%	89%	81%	72%	83%	84%	82%	83%

3.2.5 Air Force

Table 3-16
Oklahoma City Air Logistics Center (OC-ALC)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	7,071	6,902	7,425	6,727	7,636	7,408	7,376	7,075
Capacity Index	7,866	8,285	8,283	8,662	8,416	8,695	8,695	8,695
Utilization Index	90%	83%	90%	78%	91%	85%	85%	81%

The workload remains fairly level over the period. There are, however, some fluctuations in workload. Most notably, the aircraft program is influenced by the Ground Positioning System modifications for the B-1, C-135, and the E-3 programs. This workload falls off in FY01. The engine program declines in FY01, but there is an increase in exchangeables workload due to the change from "job routing" to "non-job routing" processes. Software workload increases and is primarily attributed to the B-1.

Table 3-17
Ogden Air Logistics Center (OO-ALC)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	4,275	4,113	4,448	4,513	4,932	5,004	5,088	4,644
Capacity Index	8,270	8,275	8,288	8,515	8,846	8,846	8,846	8,846
Utilization Index	52%	50%	54%	53%	56%	57%	58%	52%

The OO-ALC workload shows an overall increase for the period. This is due in part to the aircraft workload increase from the F-16 Falcon Up (upgrade), which ends in FY01. Exchangeables workload increases due to the shift of Gas Turbine Engine workload from SA-ALC. Finally, the F-16 accounts for the increase software program workload. The data portrayed does not include results of public-private competition, which is expected to be presented in the next edition.

Table 3-18
San Antonio Air Logistics Center (SA-ALC)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	6,345	5,181	3,861	2,745	216	0	0	0
Capacity Index	6,834	6,310	6,193	6,094	6,004	5,773	0	0
Utilization Index	93%	82%	62%	45%	4%	0%	0%	0%

SA-ALC essentially closes down by FY01. The remaining capacity will be divested during the fiscal year after the workload is transitioned. It is projected that the propulsion and associated exchangeables will go to contract by FY00. This includes non-Core F100, T56, TF39 and fuel accessories.

Table 3-19
Sacramento Air Logistics Center (SM-ALC)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	4,659	3,525	2,792	2,051	0	0	0	0
Capacity Index	7,622	7,480	7,459	1,836	1,838	0	0	0
Utilization Index	61%	47%	37%	112%	0%	0%	0%	0%

SM-ALC shows the majority of its workload migrating to contract by FY00. This includes C-135s, A-10s, hydraulics, instruments and electrical accessories. In addition, C-E workload continues to transition to TYAD. The remaining capacity will be divested during the fiscal year after the workload is transitioned.

Table 3-20
Warner Robins Air Logistics Center (WR-ALC)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	6,016	5,749	6,182	6,108	6,146	5,957	6,094	5,800
Capacity Index	7,889	7,848	8,263	8,397	8,397	8,397	8,397	8,397
Utilization Index	76%	73%	75%	73%	73%	71%	73%	69%

While the C-141 is slowly phased out of the inventory, there is an increase in workloads associated with the F-15, C-130, and the C-5 from SA-ALC, which will offset the decrease in C-141 workload. There is also a decrease in exchangeables workload associated with phasing out of some avionics components.

Table 3-21
Aerospace Maintenance and Regeneration Center (AMARC)
(DLH 000)

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	581	578	520	569	513	512	516	540

3.2.6 Marine Corps

The Marine Corps Maintenance Centers have always operated at high levels of capacity utilization. Layoffs, divestiture and conversion initiatives that address idle workspace are not issues for the Marine Corps with its effective capacity utilization rates. The Marine Corps strategy is to retain the capacity needed to meet Core capability requirements including above Core (i.e., Best Value) and last sources requirements. In addition the Maintenance Centers will continue enhanced efficiency productivity efforts in order to sustain favorable capacity utilization rates.

Being Multi-Commodity Maintenance Centers, organic workloads fluctuate from year to year due to the mix of dollars available from the primary customer, the Life Cycle Management Center. Programs are funded based on readiness posture which changes from year to year, and is affected by maintenance dollars.

Workload figures are based on the assumptions that scheduled Marine Corps workload Master Work Schedule (MWS) and projected other workload remain stable. Trend analysis shows, due to downsizing of DoD and thus reduced funding, a reduction in missile, ground combat, construction equipment, tactical vehicles, general purpose equipment, and ordnance. The only commodities not showing a downward trend are amphibians, due to a prototype rebuild program, and communications and electronics because of an exceptional marketing program presented with intent to enter partnerships with commercial companies.

Below is a description of current workloads and trends, covering both Maintenance Centers, by work breakdown structure.

Aircraft Components	Fluctuations are due to Air Force requirements for Jet Engine Test Stands repair.
Amphibians	Fluctuations are due to the fluctuation in funded AAVs and LAVs. Increases in FY99 are due to Reliability and Maintainability – Rebuild to Standard (RAM-RS).
Ground Combat Vehicles	Increases beginning in FY97 are due to added requirement for the M88 Recovery Vehicle.
Ground & Shipboard C-E	Decrease from FY96 to FY97 was due to available funding. Increase from FY97 to FY98 is the result of additional funding for Test, Measurement and Diagnostic Equipment (TMDE) and Foreign Military Sales (FMS). Decrease in FY99 is the result of decreasing workload in the AN/TPS-63 Radar.
Auto/Construction Equipment/Tactical Vehicle	Decline is the result of failure of program to make the funding line.
Ground General Purpose	Decrease from FY96 to FY98 is the same as above. Increase for FY99 is a result of additional workload (reverse osmosis water purification unit (ROWPU)) on the MWS.
Ord., Weapons & Munitions	Decrease from FY96 to FY97 is directly related to a reduced number of weapons being funded. Increases in FY98 are due to 10,160 M16A2 Rifles being funded. Workload is expected to decline again in FY99.
Software	Workload requirement increases in FY99 due to aging of the automated test equipment (ATE) Platform and automated program sets (APSs).
Other	FY96 and FY97 show a one-time direct dollars amount provided for the implementation of MRP II.

**Table 3-22
Maintenance Center Albany
(DLH 000)**

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	1,168	1,226	1,136	1,199	1,199	1,199	1,199	1,199
Capacity Index	1,214	1,214	1,215	1,214	1,214	1,214	1,214	1,214
Utilization Index	96%	101%	93%	99%	99%	99%	99%	99%

**Table 3-23
Maintenance Center Barstow
(DLH 000)**

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	1,441	1,193	1,244	1,095	1,046	1,050	1,052	1,052
Capacity Index	1,045	1,037	1,037	1,037	1,037	1,037	1,037	1,037
Utilization Index	138%	115%	120%	106%	101%	101%	101%	101%

3.2.7 Defense Logistics Agency

**Table 3-24
Defense Logistics Supply Command
Maintenance Depot Mechanicsburg (DLSC-M)
(DLH 000)**

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Workload	152	145	158	156	154	151	149	147
Capacity Index	158	158	158	156	154	151	149	147
Utilization Index	96%	92%	100%	100%	100%	100%	100%	100%

Actual workload decreased during FY97 due to large personnel turnovers and delays in hiring. Based on a 70/30 direct/indirect ratio, workload has been reduced in line with required productivity cuts during the FY00-05 POM process. The capacity index remains stable through FY98 and shows a reduction from FY99 through FY03, which is in line with the two percent yearly productivity reductions.